Amendments to the Claims:

Without prejudice or disclaimer, please cancel claims 5, 6, 10-16, 20-25, 28,29, 33-51, 56, 57, 64, 65, 69 and 72, and please amend claims 1, 7, 17, 26, 30, 52, 58, 62, 66, 70, 74 and 76, as follows. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Re-presented – formerly dependent claim 5) A method for modifying the characteristics of an acoustic wave, comprising the steps of:

providing a medium for acoustic wave propagation;

generating an acoustic wave;

propagating the acoustic wave using the medium;

illuminating the medium using a laser diode during the propagation of the acoustic wave; and

reading a selected frequency component of the acoustic wave.

2. (Original) The method of Claim 1, wherein the medium is a piezoelectric substrate.

3. (Original) The method of Claim 2, wherein a transducer is formed on the piezoelectric substrate.

4. (Original) The method of Claim 3, wherein the acoustic wave is generated by the transducer.

5.-6. (Cancelled)

7. (Currently Amended) ~~The~~ A method ~~of claim 6 further~~ for modifying the characteristics of an acoustic wave, comprising the ~~step~~ steps of:

providing a medium for acoustic wave propagation;

generating an acoustic wave;

propagating the acoustic wave using the medium;

illuminating the medium using a light emitting diode during the propagation of the acoustic wave;

reading a selected frequency component of the acoustic wave; and

varying an intensity of a light generated by the light-emitting diode.

8. (Original) The method of Claim 7, wherein the intensity of the light is varied by a controller.

9. (Original) The method of Claim 7, wherein the intensity of the light is varied by a light modulator.

10.-16 (Cancelled)

17. (Re-presented – formerly dependent claim 20) An apparatus for varying the characteristics of an acoustic wave, comprising:

a medium for acoustic wave propagation;

a transducer formed on the medium; and

a laser diode light source illuminating the medium,

wherein a selected frequency component of the acoustic wave is read from the transducer.

18. (Original) The apparatus of Claim 17, wherein the medium is a piezoelectric substrate.

19. (Original) The apparatus of Claim 17, wherein the transducer generates an acoustic wave.

20.-25. (Cancelled)

26. (Re-presented – formerly dependent claim 28) A method for making an acoustic wave device, comprising the steps of:

providing a medium for acoustic wave propagation;

forming a transducer on the medium;

providing a first light source for illuminating the medium; and

providing a second light source for illuminating the medium,

wherein the first light source or the second light source is a laser diode.

27. (Original) The method of Claim 26, wherein the medium is a piezoelectric substrate.

28. (Cancelled)

29. (Cancelled)

30. (Currently Amended) ~~The~~ A method ~~of claim 26, further~~ for making an acoustic wave device, comprising the ~~step~~ steps of:

providing a medium for acoustic wave propagation;

forming a transducer on the medium;

providing a first light source for illuminating the medium;

providing a second light source for illuminating the medium, and

providing means for varying an intensity of a light generated by the first light source and the second light source.

31. (Original) The method of Claim 30, wherein the means for varying the intensity of the light comprises a controller.

32. (Original) The method of Claim 30, wherein the means for varying the intensity of the light comprises a light modulator.

33.-51. (Cancelled)

52. (Re-presented – formerly dependent claim 56) A method for modifying the characteristics of an acoustic wave, comprising:

providing a medium for acoustic wave propagation;

generating an acoustic wave;

propagating the acoustic wave using the medium;

illuminating a first portion of the medium with a first illumination source operated in a first manner during the propagation of the acoustic wave; and

illuminating a second portion of the medium with a second illumination source operated in a second manner during the propagation of the acoustic wave;

wherein the medium is illuminated using a laser diode.

53. (Previously Added) The method of Claim 52, wherein the medium is a piezoelectric substrate.

54. (Previously Added) The method of Claim 53, further comprising forming a transducer on the piezoelectric substrate.

55. (Previously Added) The method of Claim 54, wherein the acoustic wave is generated by the transducer.

56.-57. (Cancelled)

58. (Currently Amended) ~~The~~ A method ~~of Claim 52, further~~ for modifying the characteristics of an acoustic wave, comprising:

providing a medium for acoustic wave propagation;

generating an acoustic wave;

propagating the acoustic wave using the medium;

illuminating a first portion of the medium with a first illumination source operated in a first manner during the propagation of the acoustic wave;

illuminating a second portion of the medium with a second illumination source operated in a second manner during the propagation of the acoustic wave; and

varying a first intensity of the first illumination source and a second intensity of the second illumination source.

59. (Previously Added) The method of Claim 58, wherein the first intensity and the second intensity are varied by a controller.

60. (Previously Added) The method of Claim 58, wherein the first intensity and the second intensity are varied by a light modulator.

61. (Previously Added) The method of Claim 52, further comprising reading a selected frequency component of the acoustic wave

62. (Re-presented – formerly dependent claim 64) An apparatus for varying the characteristics of an acoustic wave, comprising:

a medium for acoustic wave propagation;

a transducer formed on the medium for generating an acoustic wave;

a first light source illuminating a first portion of the medium during a propagation of the acoustic wave; and

a second light source illuminating a second portion of the medium during a propagation of the acoustic wave;

wherein a selected frequency component of the acoustic wave is read from the transducer; and

wherein the first light source or the second light source is a laser diode.

63. (Previously Added) The apparatus of Claim 62, wherein the medium is a piezoelectric substrate.

64.-65. (Cancelled)

66. (Currently Amended) ~~The~~ An apparatus ~~of Claim 63,~~ for varying the characteristics of an acoustic wave, comprising:

a medium for acoustic wave propagation;

a transducer formed on the medium for generating an acoustic wave;

a first light source illuminating a first portion of the medium during a propagation of the acoustic wave; and

a second light source illuminating a second portion of the medium during a propagation of the acoustic wave;

wherein a selected frequency component of the acoustic wave is read from the transducer; and

wherein the intensity of the first light source or the second light source is varied.

67. (Previously Added) The apparatus of Claim 66, wherein the intensity of the light is varied by a controller.

68. (Previously Added) The apparatus of Claim 66, wherein the intensity of the light is varied by a light modulator.

69. (Cancelled)

70. (Currently Amended) A method ~~according to claim 1, wherein:~~ for modifying the characteristics of an acoustic wave, comprising the steps of:

providing a medium for acoustic wave propagation;

generating an acoustic wave;

propagating the acoustic wave using the medium;

illuminating the medium during the propagation of the acoustic wave; and

reading a selected frequency component of the acoustic wave;

wherein illuminating the medium comprises illuminating the medium with a light having a selected characteristic;

wherein propagating the acoustic wave comprises propagating an acoustic wave having at least one of a velocity and wavelength dependent upon the selected characteristic of the light; and

wherein reading a selected frequency component of the acoustic wave comprises providing the propagating acoustic wave to a transducer to provide an electronic signal dependent upon the selected frequency of the acoustic wave.

71. (Previously Added) A method according to claim 70, wherein the selected characteristic of the light comprises at least one of a selected wavelength and a selected intensity.

72. (Cancelled)

73. (Previously Added) A method according to claim 70, wherein the selected characteristic of the light comprises at least one of a selected wavelength and a selected intensity.

74. (Currently Amended) An apparatus ~~according to claim 17, wherein:~~ for varying the characteristics of an acoustic wave, comprising:

a medium for acoustic wave propagation;

a transducer formed on the medium; and

a light source illuminating the medium,

wherein a selected frequency component of the acoustic wave is read from the transducer

wherein the light source comprises a source of light having a selected characteristic,

wherein the medium comprises a substrate material for propagating the acoustic wave having at least one of a velocity and wavelength dependent upon the selected characteristic of the light; and

wherein the transducer is coupled to receive an acoustic wave propagated by the medium and produce therefrom a signal dependent upon the selected frequency of the acoustic wave.

75. (Previously Added) A method according to claim 70, wherein the selected characteristic of the light comprises at least one of a selected wavelength and a selected intensity.

76. (Currently Amended) A method ~~according to claim 26, wherein:~~ for making an acoustic wave device, comprising the steps of:

providing a medium for acoustic wave propagation;

forming a transducer on the medium;

providing a first light source for illuminating the medium; and

providing a second light source for illuminating the medium,

wherein providing a first light source comprises providing a light source for illuminating the medium with a light having a first selected characteristic;

wherein providing a second light source comprises providing a light source for illuminating the medium with a light having a second selected characteristic;

wherein providing a medium comprises providing a substrate material for propagating the acoustic wave having at least one of a velocity and wavelength dependent upon at least one of the first and second selected characteristics of light from the first and second light sources; and

wherein the transducer is coupled to receive an acoustic wave propagated by the medium and produce therefrom a signal dependent upon the selected frequency component of the acoustic wave.

77. (Previously Added) A method according to claim 76, wherein the selected characteristics of light from each of the first and second light sources comprises at least one of a selected wavelength and a selected intensity.